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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/904,102	07/13/2001	Phuong Van Luu	02734.0482-05	1512

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EXAMINER

REDDICK, MARIE L

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 09/16/2003

19

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-19

Office Action Summary	Application No.		Applicant(s)	
	09/904,102		LUU ET AL.	
	Examiner		Art Unit	
	Judy M. Reddick		1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2003 and 15 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 112-117 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 112-117 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>18</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/15/03 has been entered.

Information Disclosure Statement

2. The information disclosure statement filed 07/15/03 has been considered and placed in the application file.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 112-117 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5, 26-31, 34 and 35 of copending Application No. 09/496,383. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instantly claimed invention overlaps in scope with the claims of US'383. As to "creping" property, it is tenable that this property would be possessed by the claims of U.S.'383 since the claims of U.S.'383 are essentially the same as the instantly claimed invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 112-117 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smigo et al (U.S. 5,281,307) in combination with Hollenberg et al (U.S. 5,246,544).

Smigo et al disclose the use of about 2 to 50 wt.%, based on a poly(vinyl alcohol)/vinyl amine copolymer(PVOH/VAM), of certain crosslinking agents which include glyoxal, glutaraldehyde and those that are commonly employed for poly(vinyl alcohol) in combination with a poly(vinyl alcohol)/vinyl amine copolymer(PVOH/VAM) as additives in a paper-making process. See, e.g., the Abstract, col. 4, lines 32-43 and 61-65, col. 5, lines 14-24, col. 6, lines 8-20 and Runs 1-5 of Smigo et al.

Hollenberg et al disclose creping adhesives defined basically as containing a crosslinkable polymer which includes hydroxylated polymers and oligomers such as polysaccharides, polyvinyl alcohols, etc., crosslinking agents which include zirconium compounds having a valence of at least 3 and other conventional adjuvants. Hollenberg et al @ col. 6, lines 29-41 further teach that the various components of the adhesive formulation, i.e., non-self-crosslinking polymer, crosslinking agent, polymer modifiers, surfactants, and anti-corrosive additives, will all be dissolved, dispersed, suspended, or emulsified in a liquid carrying fluid. This liquid will usually be a non-toxic solvent such as water wherein, the liquid component is usually present in an amount of 90 to 99.98 wt. %, preferably 99 to 99.9 wt. % based on the total weight of the creping adhesive and that the pH of the adhesive when it is applied to the desired surface in the papermaking operation

will usually be about 7.5 to 11 and that the solvent preferably consists essentially (or completely) of water. See, e.g., the Abstract, cols. 3-5 and the Runs of Hollenberg et al. The disclosure of Smigo et al differs basically from the claimed invention as per the non-express recognition of a zirconium compound as an operable crosslinker for the PVOH/VAM copolymer. However, the recited "other crosslinking agents commonly employed for poly(vinyl alcohol)" per col. 6, lines 12 and 13 necessarily implies that any crosslinking agent falling within the scope of the genus, including the claimed zirconium compounds, would have been operable within the scope of patentees invention and with a reasonable expectation of success. Moreover, Hollenberg et al who teach the commonality of using zirconium compounds as crosslinkers for hydroxylated polymers such as polyvinyl alcohol provide ample motivation to the skilled artisan to employ a zirconium compound as the commonly used x-linker for the polyvinyl alcohol component in the process of Smigo et al and with a reasonable expectation of success, absent some evidence of unusual or unexpected results. It would appear that the amount of x-linking agent per Smigo et al, as modified, would be sufficient to meet the claimed property, in the absence of anything viable on this record diffusing this issue. As to the claimed properties such as creping adhesive and peel force, it is tenable that these properties may very well be met by the composition of Smigo et al, as modified supra, since it is essentially the same as and made in essentially the same manner as the claimed adhesive composition. Moreover, it is not necessary in order to establish a prima facie case of obviousness that both a structural similarity between a claimed and prior art compound or composition be shown and that there be a suggestion in or expectation from the prior art that the claimed compound or composition will have the same or similar property or utility as the one newly discovered by applicant as provided for under the guise of *In re Dillon*, 919 F. 2d 688, 693 16 USPQ2d 1897, 1901, Fed. Cir.(1990).

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7. Applicant's arguments filed 07/15/03(06/04/03) have been fully considered but they are not persuasive.

Relative to the Objection to claim 112 raised in the previous Office Action—While Counsel apparently believed that the issue was corrected via an amendment, no such amendment exists. On second thought, this Objection is herein withdrawn.

Relative to the OTDP rejection---Since an acceptable Terminal Disclaimer has not been received in this application, the OTDP rejection stands.

Relative to Smigo et al in combination with Hollenberg et al--It is urged and maintained that the instantly claimed invention is obvious within the meaning of 35 USC 103 over Smigo et al in combination with Hollenberg et al as per reasons given in the Grounds of Rejection supra. The crux of Counsel's arguments appears to hinge on there being no teaching nor suggestion in Hollenberg et al that zirconium-containing compounds can be used to crosslink an amine-containing moiety as disclosed and claimed herein by the Applicants. With all due respect to Counsel's opinion, the claims are not so limited and furthermore, Smigo et al teach that crosslinking agents which are added along with the PVOH/vinylamine copolymer include "other crosslinking agents commonly employed for polyvinyl alcohol"(col. 6, lines 8-20) and, to this end, Hollenberg et al, @ col. 3, lines 34-48 and col. 4, lines 10-68, who teach the use of zirconium compounds, viz., ammonium zirconium carbonate, for the non-self-crosslinkable materials which include a polymer or oligomer which contains a crosslinkable functional group(s) such as hydroxyl groups, viz., polyvinyl alcohol, provides ample motivation to use the zirconium compounds as the commonly employed crosslinking agent for poly(vinyl alcohol) in the copolymer of Smigo et al. Counsel's arguments further appear to hinge on modifying Smigo et al with the zirconium compounds of Hollenberg et al would not provide a/an (creping) adhesive and even if the zirconium compounds of Hollenberg were used in the teachings of Smigo, there would not be sufficient x-linking to form an adhesive and, to this end, mere arguments of Counsel unsupported by factual evidence are given little weight(In re Lindner 173 USPQ 356).

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As to the Runs in Table 8, it is not clear to the Examiner that these Runs show that compositions equivalent to those crosslinked with 100 to 200 wt.% of glyoxal are required to obtain compositions effective as a creping adhesive or to be comparable to compositions within the scope of what is being claimed. Further, one would expect that the amount of x-linking agent required would vary with and would be a function of the polymer being used.

As to the Data presented per Tables 7 and 8 relative to various properties such as STFI LENGTH and FRICTION, the improvements shown by the inventive AZR-crosslinked PVOH-VAM copolymer do not appear to be significantly better than those of the glyoxal-crosslinked PVOH-VAM copolymer(non-inventive). In any event, even if the Examiner has somehow missed the boat and this turns out not to be the case, the claims are simply not limited to where any improvement might have been shown.

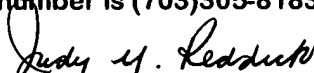
As to the arguments directed to it not being obvious to employ a polyvinyl alcohol-vinyl amine polymer from Smigo et al as the polymer used in the creping adhesive of Hollenberg et al, this has been found persuasive. Therefore, any other arguments based on the modification of Hollenberg et al via Smigo et al(see the Office Action of paper no.11, 01/15/03) are moot.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judy M. Reddick whose telephone number is (703)308-4346. The examiner can normally be reached on Monday-Friday, 6:30 a.m.-3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703)308-2450. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-8183.


Judy M. Reddick
Primary Examiner
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JMR *JMR*
9.10.03